

COMPOSITIONS AND METHODS FOR  
ALTERING THE DISULFIDE STATUS OF PROTEINS

ABSTRACT OF THE DISCLOSURE

5 Compositions and methods for the alteration of the disulfide status of plant  
proteins are provided. Novel nucleotide molecules, comprising nucleotide sequences for  
thioredoxin *h* and NADPH-thioredoxin reductase, and the proteins encoded thereby are  
provided. The nucleotide sequences can be used to transform plants alone or in  
combination with other sequences, such as sequences encoding NADPH generating  
10 enzymes, to manipulate the thioredoxin *h* system and alter the protein disulfide status in  
plants. Transformed plants, plant cells, plant tissues, seed and grain are provided.

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